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METHOD FOR MANUFACTURING CARAMEL-CONTAINING PALATINOSE

[Patent Application Publication]

[illegible] et al.

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[54]	[Illegible]	
[75]	[Illegible]	
[73]	[Illegible]	
[21]	[Illegible]	
[22]	[Illegible]	
[51]	[Illegible]	
[52]	[Illegible]	
[58]	[Illegible]	
[56]	[Illegible]	
[57]	[Illegible]	
[71]	[Illegible]	
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Claims

1. A mixing medium for nanostructuring materials, in which it is characterized by the fact that they have polyhedral spherical shapes with varying diameters between 1 and 100 nanometers, the nanostructured material is subjected to a temperature at which primitive heterocrystals will not disappear, and polyhedral nanocrystals are added and mixed.

2. Methods described as in Claim 1 wherein the crystal added and mixing for polyhedral nanocrystals, the nanomaterial is annealed immediately subjected to cool to room temperature.

3. Methods described as in Claim 1 or 2 wherein the nanomaterial are essentially composite nanocrystalline films.

4. Methods described as in any one of Claims 1-3 wherein the nanomaterial consist essentially of nanocrystalline silicon and carbon substance.

5. Methods described as in any one of Claims 1-3 wherein the primitive heterocrystal are selected from the group consisting polyhedral nanocrystals.

6. Methods described as in Claim 1, wherein the heterocrystalline polyhedral nanocrystals are wherein after mixing the primitive with carbon nitrides and oxides, it is cooled below temperatures at which primitive crystals exist, more common if primitive, predetermined nitrides are added to nanocrystals and at least a portion of the primitive crystalline crystals exist.

7. Methods described as in Claim 5 or 6 wherein the product is made mainly of polyhedral, 0.72 nm, mixing with 20% oxygen and water.

8. Methods described as in any one of Claims 5-7 wherein the product containing primitive crystalline crystals is added to amount, or melt with, treated with respect to amount to right.

9. Methods described as in any one of Claims 1-8 wherein a total of 11-49 weight percentage of polyhedral with respect to carbon, weight percentage of the silicon.

10. Caramels that have gelatin, [illegible], sugars, milk proteins and fats and oils as the main components, provided that at least a portion of the saccharide content is palatinose, and that essentially contain no starch syrup or wheat flour.

Detailed Explanation of the Invention

Industrial Application Field

This invention pertains to caramel manufacturing methods. More specifically, it pertains to caramel manufacturing methods that utilize the unique properties of palatinose, which is a kind of sugar.

Prior Art

During the Showa Era (1945-1955), in terms of domestic candy production, caramels were king among Western confectioneries. But since then, confections have diversified. Additionally, it came to be said that of all confections, caramels most easily lead to cavities, and their production quantities thus decreased rapidly. The main caramels have table sugar, starch syrup, milk, condensed milk, butter, hardening fat, emulsifier, wheat flour, seasonings, etc. as starting materials. These substances each contribute [illegible] and create caramels with body, color and texture. Previous methods for manufacturing milk caramels consisted of the above starting materials, with table sugar and [illegible] in some amount of water in a preparation tank with attached stirrer and heated there. Next, the starch syrup and, finally, the condensed milk and wheat flour were kneaded together in the mixer. The mixture was heated to 80°C to mix the various starting materials together thoroughly and improve the flavor. This was sent to a storage tank and uniform quantities were sent to a reduction tank. Here, the mixture was cooked down to a product temperature of 115-122°C. Emulsifier was then added. Seasonings were added after heating was stopped, and the mixture was [illegible]; it was cooled to an appropriate temperature by passing cold water through the jacket and sent

Detailed description

The invention has now been described in detail with reference to specific embodiments thereof. However, it will be apparent to those skilled in the art that various changes and modifications can be made without departing from the spirit and scope of the invention.

The following examples illustrate various embodiments of the invention. Unless otherwise stated, all parts and percentages are by weight. Unless otherwise stated, reactions are carried out at room temperature (20°C to 25°C).

The invention will be more clearly understood from the following examples, which are given by way of illustration only. Those skilled in the art will appreciate that many variations may be made without departing from the scope of the invention. Moreover, the invention will be further illustrated by the following examples, which are not to be construed as limiting the invention in any way.

Application example

The following polishing slurries were prepared and used to polish a silicon wafer as follows.

Polishing slurries were prepared. The polishing slurry was used to polish a silicon wafer. The polishing slurry was prepared by mixing 100 g of a 10% by weight aqueous solution of a polishing agent with 100 g of a 10% by weight aqueous solution of a polishing agent. The polishing slurry was prepared by mixing 100 g of a 10% by weight aqueous solution of a polishing agent with 100 g of a 10% by weight aqueous solution of a polishing agent.

[illegible]

[illegible]

Key 1 [illegible]

2 A: [illegible]

B: [illegible]

C: [illegible]

D: [illegible]

E: [illegible]

F: [illegible]

G: [illegible]

[illegible]

	A	B	C	D	E	F	G
[illegible]	Poor	Somewhat good	Good	Good	Good	Good	Good
Shape retention	Poor	Somewhat good	Good	Good	Good	Good	Good
[illegible]	Poor	Good	Good	Good	Good	Somewhat good	Poor

Citrus	Good	Good	Good	Good	Good	[illegible]	Fine
Magnolia	Good	Good	Good	Good	Good	[illegible]	Fine

In all the above results, the [illegible] was [illegible] the coated was difficult and left small lumps of fondant in the product. [illegible] and [illegible] for maintaining the shape of the coconut. The amount of palatinose in the fondant being [illegible] was [illegible]. [illegible] the [illegible] sugar was replaced with palatinose syrup, [illegible] maltose, isomaltooligosaccharide, reduced palatinose, etc. In the case of palatinose syrup, the [illegible] in the syrup had to be [illegible] into the palatinose [illegible].

Comparative Example 5

[illegible] shown in the following [illegible] the [illegible] used in the [illegible] [illegible]. Consequently, the amount of palatinose in the fondant was [illegible] solids.

Coating-forming material blend

[illegible table]

Note 1) [illegible] Palatinose

Reduced malt sugar

Sugarless condensed milk

Fats and oils

Emulsifier

Flavorant

Second property test results

	A	B	C	D	E	F	G
Formability	Poor	Somewhat good	Good	Good	Good	Good	Good
Shape retention	Poor	Good	Good	Good	Good	Good	Good
Texture	Poor	Somewhat good	Good	Good	Good	Somewhat good	Poor
Flavor	Good	Good	Good	Good	Good	Good	Poor

From the above table, optimal formulations were possible when palatinose content was [illegible]% to [illegible]% of total saccharide solids. Preferably it was in the range of 41.7% to 58.2%.

APPLICATION EXAMPLE 2

Using the following ingredients, palatinose-containing candies were made by the manufacturing method given in Application Example 1. The palatinose portion was made with proportions of 56 parts palatinose and 56 parts maltitose (sic).

Palatinose 56 parts

Reduced malt sugar 56 parts

Sugarless condensed milk 100 parts

[illegible] [illegible]

[illegible]	15 parts
[illegible]	0.15 parts
[illegible]	7.5 parts

The curious practice of hedgerow [illegible] and helper constant. Each of the to notice the [illegible] and to [illegible] the reader with great [illegible].

Appellate Instance 5

[illegible] Pure blend by the following, warning threefold [illegible] were a [illegible] and under scattered prospective weight. Diet [illegible] closet and was [illegible] [illegible] prospective pressure [illegible]. The [illegible] was [illegible] from a white [illegible] for to and cooked to 165°C with [illegible]. The [illegible] and [illegible] was continued [illegible] [illegible]. The [illegible] [illegible] and [illegible] a [illegible] [illegible] [illegible] [illegible] [illegible].

Substance [illegible]	Acetate Blended
[illegible]	7.0 pint
[illegible]	2.1 pint
Signed [illegible]	35 grams
[illegible]	1 pinch
[illegible]	0.25 grams
[illegible]	25 grams

In the summer of 2023, Sunnyvale Middle School's 7th grade class raised money by selling lemonade at a stand in front of the school. They sold cups for $2 each. On the first day, they sold 47 cups. On the second day, they sold 63 cups.

Question 1: Multiple Choice

A student was instructed to heat a sample of pure ethanol (molar mass 46.07 g/mol) in a calorimeter. The initial temperature was 25.0 °C and, at equilibrium, the temperature was 78.4 °C. The mass of ethanol heated was 12.50 g. The specific heat capacity of ethanol is 2.44 J/(g·°C). The heat of vaporization of ethanol is 841 J/g. Assuming no heat is lost to the surroundings, how much heat was absorbed by the ethanol, in joules?

Polyethylene	50 parts
Polystyrene	70 parts
Soy protein isolate	104 parts
Sodium hydroxide	18.5 parts
Borax	6.5 parts
Deionized water	10 parts

The laboratory technician recorded the following data in her notebook. Each trial was performed in triplicate, and the results are shown in the table below.